

The Claims

What is claimed is:

- 5 1. Osteoprotegerin obtainable from human or bovine milk or colostrum.
2. The osteoprotegerin according to claim 1, which has a glycosylation pattern giving rise to a polypeptide having a molecular weight of approximately 80, 130 and 200 kDa.
- 10 3. The osteoprotegerin according to claim 1, which has a polypeptide sequence identified by SEQ ID. No. 1.
4. A food material containing an osteoprotegerin according to claim 1.
- 15 5. The food material of claim 4 which is selected from the group consisting of milk, yogurt, curd, cheese, fermented milks, milk-based fermented products, ice-creams, fermented cereal-based products, milk-based powders, infant formulae and pet food.
- 20 6. An enteral composition or a pharmaceutical composition containing osteoprotegerin according to claim 1 in an amount effective to assist in formation of lymphoid tissues and regulation of immune responses in a subject that consumes the composition.
- 25 7. The enteral or pharmaceutical composition according to claim 6, which is selected from the group consisting of a solution, dried oral supplement, liquid oral supplement, dry tube-feeding or liquid tube-feeding.
- 30 8. A method of making a food material or an enteral or pharmaceutical composition which comprises adding an amount of osteoprotegerin according to claim 1 effective to assist in formation of lymphoid tissues and regulation of immune responses in a subject that consumes the composition.

9. The method according to claim 8, wherein the amount of osteoprotegerin is added to a food material selected from the group consisting of milk, yogurt, curd, cheese, fermented milks, milk-based fermented products, ice-creams, fermented cereal-based products, milk-based powders, infant formulae and pet food.

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10. The method according to claim 8, wherein the amount of osteoprotegerin is added to an enteral or pharmaceutical composition.

11. An ingestible product made by the method of claim 8.

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12. A method for the treatment of disorders associated with bone remodeling which comprises administering to a person in need of such treatment the ingestible composition of claim 11.

15 13. The method according to claim 11, wherein the disorder is osteoporosis, Paget's disease of bone, Osteomyelitis, infectious lesions in bone leading to bone loss, hypercalcemia, osteopenia, osteonecrosis, bone loss due to osteoarthritis or rheumatoid arthritis, periodontal bone loss or osteolytic metastasis.

20 14. A method for the treatment or prophylaxis of immune disorders which comprises administering to a person in need of such treatment the ingestible composition of claim 11.

25 15. The method according to claim 14, wherein the immune disorder is allergy, autoimmunity, inflammatory bowel diseases, systemic autoimmune conditions, dysregulation of cell proliferation and apoptosis and immunopathological conditions of the skin, the oral cavity, the gastrointestinal, urogenital or respiratory tracts.

30 16. The method according to claim 14, wherein the disorders are associated with prematurity and/or low birth weight and the composition is administered to a child in need of such treatment.